Report Grading Scheme

In Project Werner final report you will be summarizing your data. You will need to write a condensed form of scientific writing, sometimes called a white or gray paper. These reports are typically used "in house" or as reviews for grant agencies. The key is to be concise. Use the comments and suggestions given to you by your TAs on your post-lab assignments.

Follow the outline below (and on the next page):

I. Abstract
- A. State synthetic result
  - 1. "Starting with cobalt(II) chloride we synthesized tetraammine cobalt(III) chloride, a green crystalline compound."
- B. State analytical experiments which lead you to result
  - 1. Use specific numbers to back up your conclusion

II. Introduction
- A. Not required

III. Experimental Procedures
- A. Use your post-lab assignments and the TAs suggestions to write this section

IV. Results and Discussion
- A. State which compound you synthesized
  - 1. Use the data you collected to support your statement.
  - 2. Generally these types of reports are no more that two pages of written words
    - a. Graphs, plots, and tables are attached to the end rather than embedded in the report body.
    - b. Make sure to use figure references for the reader.
      - i. Example: The infrared spectrum (Fig. 3) supports the finding.
- B. Observational Results
  - 1. Yields of Product
    - a. Not required
  - 2. UV-Vis Spectroscopy and Standard Curve
    - a. Table of data
      - i. Report
        - (a) mass
        - (b) concentration
        - (c) molecular mass
      - ii. Report mean and standard deviation of samples,
  - 3. Infrared Characterization
    - a. Plot spectra
    - b. Table of assignments
    - c. Label plot with important peaks in the diagnostic region (i.e. 4000 cm-1-1200 cm-1).
  - 4. Cl- Titration
    - a. Table of data
      - i. see post-lab assignment

ii. mean and standard deviation of samples

b. Discuss data validity

i. Discuss your precision and accuracy

5. Generally you state the result of the experiment, follow that with a simple state as to how it fits into the scope of the work, the describe the quality of the data.

V. Conclusion

A. Summarize the chemistry conducted.

1. State what was synthesized (similar to abstract)

B. Recap the characterizations

1. State which characterization methods were conducted, and the conclusions which resulted.

a. Standard dilution and UV-Vis showed its molecular mass was XXX g/mol.

b. IR showed certain ligands, through characteristic peaks at XXXX cm^{-1}.

c. Titration showed it had X ionic Cl^-.

C. State your compound… again.